

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-8 (Cancelled)

9. **(Original)** A method for treating a thrombotic condition in a mammal, said method comprising administering to said mammal a pharmacologically acceptable dose of a modified low molecular weight heparin (MLMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.

10. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound (1) inhibits fibrin-bound thrombin and fluid-phase thrombin by catalyzing antithrombin, and (2) thrombin generation by catalyzing factor Xa inactivation by antithrombin.

11. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound has an anti-factor IIa activity of about 40 U/mg to about 100 U/mg, and an anti-factor Xa activity of about 90 U/mg to about 150 U/mg.

12. **(Original)** The method in accordance with claim 11, wherein said MLMWH compound has an anti-factor Ha activity of about 60 U/mg to about 75 U/mg, and an anti-factor Xa activity of

about 100 U/mg to about 125 U/mg.

13. **(Original)** The method in accordance with claim 12, wherein said MLMWH compound has an anti-factor IIa activity of about 65 U/mg, and an anti-factor Xa activity of about 115 U/mg.

14. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound has a molecular weight of about 5,400 Daltons to about 8,000 Daltons.

15. **(Original)** The method in accordance with claim 9, wherein said MLMWH, wherein said MLMWH compound has a molecular weight of about 5,800 Daltons to about 7,000 Daltons.

16. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound has a molecular weight of about 6,000 Daltons.

17. **(Original)** The method in accordance with claim 9, wherein said thrombotic condition is arterial thrombosis.

18. **(Original)** The method in accordance with claim 9, wherein said thrombotic condition is coronary artery thrombosis.

19. **(Original)** The method in accordance with claim 9, wherein said thrombotic condition is venous thrombosis.
20. **(Original)** The method in accordance with claim 9, wherein said thrombotic condition is pulmonary embolism.
21. **(Original)** The method in accordance with claim 9, wherein said MLMWH compound is administered by injection.
22. **(Original)** A method of preventing the formation of a thrombus in a mammal at risk of developing thrombosis, said method comprising administering to said mammal a pharmacologically acceptable dose of a modified low molecular weight heparin (MLMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.
23. **(Original)** The method in accordance with claim 22, wherein said MLMWH compound (1) inhibits fibrin-bound thrombin and fluid-phase thrombin by catalyzing antithrombin, and (2) thrombin generation by catalyzing factor Xa inactivation by antithrombin.
24. **(Original)** The method in accordance with claim 22, wherein said MLMWH compound has an anti-factor Ha activity of about 40 U/mg to about 100 U/mg, and an anti-factor Xa activity of about 90 U/mg to about 150 U/mg.

25. **(Original)** The method in accordance with claim 24, wherein said MLMWH compound has an anti-factor Ha activity of about 60 U/mg to about 75 U/mg, and an anti-factor Xa activity of about 100 U/mg to about 125 U/mg.
26. **(Original)** The method in accordance with claim 25, wherein said MLMWH compound has an anti-factor h a activity of about 65 U/mg, and an anti-factor Xa activity of about 115 U/mg.
27. **(Original)** The method in accordance with claim 22, wherein said MLMWH compound has a molecular weight of about 5,400 Daltons to about 8,000 Daltons.
28. **(Original)** The method in accordance with claim 22, wherein said MLMWH, wherein said MLMWH compound has a molecular weight of about 5,800 Daltons to about 7,000 Daltons.
29. **(Original)** The method in accordance with claim 22, wherein said MLMWH compound has a molecular weight of about 6,000 Daltons.
30. **(Original)** The method in accordance with claim 22, wherein said mammal is at increased risk of developing a thrombus due to a medical condition which disrupts hemostasis.
31. **(Original)** The method in accordance with claim 30, wherein said medical condition is

coronary artery disease.

32. **(Original)** The method in accordance with claim 30, wherein said medical condition is atherosclerosis.

33. **(Original)** The method in accordance with claim 22, wherein said mammal is at increased risk of developing a thrombus due to a medical procedure.

34. **(Original)** The method in accordance with claim 33, wherein said medical procedure is cardiac surgery.

35. **(Original)** The method in accordance with claim 34, wherein said medical procedure is cardiopulmonary bypass.

36. **(Original)** The method in accordance with claim 33, wherein said medical procedure is catheterization.

37. **(Original)** The method in accordance with claim 36, wherein said catheterization is cardiac catheterization.

38. **(Original)** The method in accordance with claim 33, wherein said medical procedure is atherectomy.

39. **(Original)** A method for inhibiting thrombus formation in a patient, said method comprising the step of administering to the patient a pharmacologically acceptable dose of a modified low molecular weight heparin (MLMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.

40. **(Original)** The method in accordance with claim 39, wherein said MLMWH compound (1) inhibits fibrin-bound thrombin and fluid-phase thrombin by catalyzing antithrombin, and (2) thrombin generation by catalyzing factor Xa inactivation by antithrombin.

41. **(Original)** A method for inhibiting fibrin-bound thrombin and thrombin generation in a mammal, said method comprising administering to said mammal a pharmacologically acceptable dose of a modified low molecular weight heparin (MLMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.

Claims 42-45 (**Cancelled**)

46. **(Previously Presented)** A method for treating a thrombotic condition in a mammal comprising administering a pharmacologically acceptable dose of a purified preparation of claim 43.

47. **(Previously Presented)** A method of preventing the formation of a thrombus in a mammal at risk of developing thrombosis comprising administering to the mammal a pharmacologically acceptable dose of a purified preparation of claim 43.

48. **(Previously Presented)** A method for inhibiting fibrin-bound thrombin and thrombin generation in a mammal comprising administering to the mammal a pharmacologically acceptable dose of a purified preparation of claim 43.

Claim 49 **(Cancelled)**

50. **(New)** A method for treating a thrombotic condition in a mammal, said method comprising administering to said mammal a pharmacologically acceptable dose of a low molecular weight heparin (LMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.

51. **(New)** The method in accordance with claim 50, wherein said LMWH compound (1) inhibits fibrin-bound thrombin and fluid-phase thrombin by catalyzing antithrombin, and (2) thrombin generation by catalyzing factor Xa inactivation by antithrombin.

52. **(New)** The method in accordance with claim 50, wherein said LMWH compound has an anti-factor IIa activity of about 40 U/mg to about 100 U/mg, and an anti-factor Xa activity of about

90 U/mg to about 150 U/mg.

53. **(New)** The method in accordance with claim 52, wherein said LMWH compound has an anti-factor Ha activity of about 60 U/mg to about 75 U/mg, and an anti-factor Xa activity of about 100 U/mg to about 125 U/mg.

54. **(New)** The method in accordance with claim 53, wherein said LMWH compound has an anti-factor IIa activity of about 65 U/mg, and an anti-factor Xa activity of about 115 U/mg.

55. **(New)** The method in accordance with claim 50, wherein said LMWH compound has a molecular weight of about 5,400 Daltons to about 8,000 Daltons.

56. **(New)** The method in accordance with claim 50, wherein said LMWH, wherein said MLMWH compound has a molecular weight of about 5,800 Daltons to about 7,000 Daltons.

57. **(New)** The method in accordance with claim 50, wherein said LMWH compound has a molecular weight of about 6,000 Daltons.

58. **(New)** The method in accordance with claim 50, wherein said thrombotic condition is arterial thrombosis.

59. **(New)** The method in accordance with claim 50, wherein said thrombotic condition is coronary artery thrombosis.

60. **(New)** The method in accordance with claim 50, wherein said thrombotic condition is venous thrombosis.

61. **(New)** The method in accordance with claim 50, wherein said thrombotic condition is pulmonary embolism.

62. **(New)** A method for inhibiting thrombus formation in a patient, said method comprising the step of administering to the patient a pharmacologically acceptable dose of a low molecular weight heparin (LMWH) compound having a molecular weight of about 5,000 Daltons to about 9,000 Daltons.